



*The AFIT of Today is the Air Force of Tomorrow.*

# **Overview of the Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule**

Mr. Don Van Schaack

AFIT/CEV

Donald.vanschaack@afit.edu

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>MAY 2011</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2011 to 00-00-2011</b>	
4. TITLE AND SUBTITLE <b>Overview of the Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Air Force Institute of Technology, AFIT/CEV, Wright Patterson AFB, OH, 45433</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES <b>Presented at the NDIA Environment, Energy Security &amp; Sustainability (E2S2) Symposium &amp; Exhibition held 9-12 May 2011 in New Orleans, LA.</b>					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>15</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



# Overview



*The AFIT of Today is the Air Force of Tomorrow.*

- Steps in GHG Permitting
- Rule Implementation
- PSD Greenhouse Gas (GG) requirements
- Title V GG Requirements



# Steps in Permitting of GHGs



*The AFIT of Today is the Air Force of Tomorrow.*

- May 2007- Supreme Court Ruling
- December 2009- Endangerment finding on GHGs
- April 2010- GHG Emission standards for Light-duty vehicles
  - 2 Jan 11- Stationary source permitting triggered
- May 2010- GHG Title V/PSD Tailoring Rule
- March 2011 - Guidance to states on GHGs permitting



# Rule Implementation



*The AFIT of Today is the Air Force of Tomorrow.*

- Two-step phase in of requirements for largest emitter of GHGs
  - Facilities responsible for nearly 70% of GHG emissions
- Expand rule to cover large sources of GHG not previously covered by CAA
- Additional EPA steps
  - Looking at smaller sources



# PSD Requirements



*The AFIT of Today is the Air Force of Tomorrow.*

- Step 1 (2 Jan 2011- 30 Jun 2011)
  - Only sources that are constructed or modified that have increase or net increase in emissions over thresholds required to address GHG emissions under PSD
  - For GHG increases over 75,000 TPY CO<sub>2</sub>e would have Best Available Control Technology (BACT) requirements AND
  - Greater than 0 TPY on a TPY mass basis



# PSD Requirements



*The AFIT of Today is the Air Force of Tomorrow.*

- Step 2 (1 July 2011 – 30 Jun 2013)
  - Builds upon Step 1
  - Three scenarios where PSD applies to GHG emissions
  - Scenario 1:
    - Modification subject to PSD (for other NSR pollutant) and has GHG emissions increase and net emissions increase:  
 $\geq 75,000$  TPY CO<sub>2</sub>e **AND**  
 $> 0$  TPY mass basis



# PSD Requirements



*The AFIT of Today is the Air Force of Tomorrow.*

- Step 2 (1 July 2011 – 30 Jun 2013)-(con't)
  - Scenario 2 (Both below conditions must apply)
    - Existing source has a PTE  $\geq 100,000$  TPY CO<sub>2</sub>e **AND** 100/250 TPY mass basis
    - Modification has a GHG emissions increase and net emissions increase  $\geq 75,000$  TPY CO<sub>2</sub>e **AND**  $> 0$  TPY mass basis





# PSD Requirements



*The AFIT of Today is the Air Force of Tomorrow.*

- Step 2 (1 July 2011 – 30 Jun 2013)-(con't)
    - Scenario 3 (Both below conditions must apply)
      - Source is an existing minor source for PSD
- AND**
- Modification alone has actual or potential emissions  $\geq 100,000$  TPY CO<sub>2</sub>e **AND** 100/250 TPY mass basis



# Title V Requirements



*The AFIT of Today is the Air Force of Tomorrow.*

- Step 1 (2 Jan 2011 – 30 Jun 2011)
  - Only sources currently subject to a Title V Permit would be subject to Title V Requirements for GHG
  - No sources would be subject to CAA permitting requirements due solely to GHG emissions



# Title V Requirements



*The AFIT of Today is the Air Force of Tomorrow.*

- Step 2 (1 Jul 2011 to 30 Jun 2012)
  - Comply with Step 1
  - Facilities can now require Title V permits for GHG emissions alone
    - Threshold is 100,000 TPY CO<sub>2</sub>e **AND**
    - 100 TPY GHG mass basis
- EPA estimates 550 sources will need Title V permits for GHG emissions
  - Majority will be solid waste landfills and industrial manufacturers



# Title V Permitting Requirements



*The AFIT of Today is the Air Force of Tomorrow.*

- Sources that fall under Step 1 or Step 2 must ensure applicable GHG requirements addressed in Title V permit
  - Permits must contain conditions to prove compliance
- EPA anticipates initial applicable requirements will be GHG control requirements resulting from PSD actions



# Additional Step- Step 3



*The AFIT of Today is the Air Force of Tomorrow.*

- Commence in 2011 and end NLT 1 Jul 12
- Will discuss whether smaller sources can be permanently excluded from permitting
- EPA will propose viable streamlining options
- Permits not required for smaller sources in Step 3 or other actions until at least 30 Apr 16
- Step 3 (if necessary) will not require permitting for sources < 50,000 TPY



# Other Steps



*The AFIT of Today is the Air Force of Tomorrow.*

- End of Apr 2015- EPA to complete study on remaining permit burdens that would exist if Step 3 applied
  - Rule by 30 Apr 2016 to address these facilities
    - Decide if streamlining is needed to phase in more sources or permanent exclusion from permitting
- Step 3 (if necessary) will not require permitting for sources < 50,000 TPY



# EPA Technical Tools/Resources



*The AFIT of Today is the Air Force of Tomorrow.*

- White Papers on:
  - Numerous sources including large commercial/industrial/institutional boilers,
- Control Technology Clearinghouses
  - RACT/BACT/LAER
  - GHG Mitigation Strategies
- GHG Permitting Action Team
- GHG Training for Permitting Authorities, Industry and Other Stakeholders
- One-stop website for GHG permitting resources:  
[www.epa.gov/nsr/ghgpermitting.html](http://www.epa.gov/nsr/ghgpermitting.html)



# Summary



*The AFIT of Today is the Air Force of Tomorrow.*

- PSD/Title V Tailoring Rule – final rule 13 May 2010
  - Rule defines when permits are due under both programs
- Facilities responsible for nearly 70% of national GHG emissions covered under rule
- Requirements became effective 2 Jan 11
  - Implemented in two steps